

CLAIMS AMENDMENT

Claims 1 (canceled)

2. (currently amended) The tissue type recognition system of claim 4 15 wherein said electrodes are used in pairs to measure a pulse response of said tissue.

3. (currently amended) The tissue type recognition system of claim 4 15 wherein each of said plurality of electrodes are used to perform a terminal conductivity measurement.

4. (currently amended) The tissue type recognition system of claim 4 15 wherein contact between said electrodes and said tissue is checked by making measurements on adjacent pairs of said plurality of electrodes.

5. (currently amended) The tissue type recognition system of claim 4 15 wherein said current is between 0 and 10 milliamps applied at a frequency of at least 100 kHz.

Claims 6-7 (canceled)

8. (currently amended) The tissue type recognition system of claim 4 15 wherein the tip further comprises a large electrode.

9. (currently amended) The tissue type recognition system of claim 4 15 wherein said

electrodes are arranged in a number of rows.

10. (currently amended) A method for detecting the presence of abnormal tissue in a cervix (according to claim 16 further) comprising a step for scanning a canal wall electronically by employing in turn electrodes arranged in a number of rows so that appropriate pairs of electrodes are energized thereby simulating movement of one pair of electrodes in a circular scanning motion along said canal wall.

11. (previously amended) A tissue type recognition system for determining a type of unknown tissue, comprising :

- a tip;

- a shaft for coupling said tip to a handle;

- a plurality of electrodes in said tip;

- tissue recognizing circuitry electrically coupled to said plurality of electrodes;

- wherein said circuitry injects electrical current into said tissue via said electrodes for measuring at least two unique electrical properties of said tissue; and,

- each of said electrical properties is compared with corresponding electrical properties of known tissue types to determine said type of unknown tissue

- wherein the tissue recognizing circuitry further comprises means for measuring a pulse response of said tissue, an electrical resistance of said tissue, a reactance of said tissue, and a potential difference of said tissue.

Claims 12-14 (Canceled)

15. (Allowed) A tissue type recognition system for determining a type of unknown tissue, comprising :

a tip;

a shaft for coupling said tip to a handle;a plurality of electrodes in said tip;

tissue recognizing circuitry electrically coupled to said plurality of electrodes;

wherein said circuitry injects electrical current into said tissue via said electrodes for measuring at least two unique electrical properties of said tissue; and,

each of said electrical properties is compared with corresponding electrical properties of known tissue types to determine said type of unknown tissue

wherein said electrodes are configured with an outer pair and an inner pair, said outer pair being larger than said inner pair so that a homogeneity of an electrical field seen by said inner pair is thereby improved.

16. (New) The method for detecting the presence of abnormal tissue in a cervix by conducting a discriminant analysis, said analysis comprising the steps of:

measuring an electrical conductivity of cervical tissue in said cervix via a first pair of electrodes;

measuring a pulse and decay property of said cervical tissue in said cervix via a second pair of electrodes; and,

determining from said conductivity measurement and said pulse and decay properties measurement whether the cervix has normal and abnormal cervical tissue,

wherein, the step of measuring a pulse and decay property includes measuring a pulse response of the tissue by applying a pulse across said second pair of electrodes

and, further, measuring a decay of said pulse across said second pair of electrodes.

17. (New) A method for detecting the presence of abnormal tissue in a cervix by conducting a discriminant analysis according to claim 16, said analysis further comprising the step of determining a reactance of said tissue by:

- measuring a first phase angle of voltage across said tissue
- selecting circuitry electrically coupled to said tissue via a pair of said electrodes;
- measuring a second phase angle of voltage across said pair of electrodes;
- comparing said first and said second phase angles to yield data on the reactive part of the tissue impedance.

18. (New) The method for detecting the presence of abnormal tissue in a cervix by conducting a discriminant analysis according to claim 16, said analysis further comprising the step of measuring a potential difference of said tissue by:

- injecting current into said tissue via a pair of said electrodes;
- discontinuing said current; and,
- raising a gain of a programmable gain amplifier connected to said pair of electrodes.